

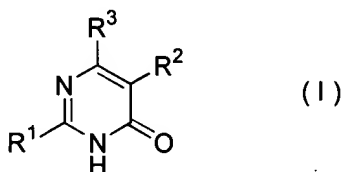
Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12: (Canceled).

Claim 13: (New) A method for therapeutic treatment of a disease caused by tau protein kinase 1 hyperactivity, which comprises administering to a patient a therapeutically effective amount of a substance selected from the group consisting of a pyrimidone derivative represented by formula (I) or a salt thereof, or a solvate thereof or a hydrate thereof:



wherein

R¹ represents a group represented by -N(R⁴)-W-R⁵ wherein

R⁴ and R⁵ independently represent a hydrogen atom, a C₁-C₁₈ alkyl group which may be substituted, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl group which may be substituted, and

symbol "W" represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

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R^2 represents a hydrogen atom, hydroxyl group, an unsubstituted C_1 - C_8 alkyl group, a C_3 - C_8 alkenyl group which may be substituted, a C_3 - C_8 cycloalkyl group which may be substituted, a C_1 - C_8 alkyloxy group which may be substituted, a C_3 - C_8 cycloalkyloxy group which may be substituted, a C_6 - C_{14} aryloxy group which may be substituted, a C_1 - C_8 alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C_1 - C_8 alkyloxycarbonyl group which may be substituted, a C_3 - C_8 cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C_1 - C_8 alkylaminocarbonyl group which may be substituted, or a C_1 - C_8 dialkylaminocarbonyl group which may be substituted; and

A2 R^3 represents a pyridyl group which may be substituted.

Claim 14: (New) The method according to claim 13, wherein the disease is a neurodegenerative disease.

Claim 15: (New) The method according to claim 13, wherein the disease is selected from the group consisting of Alzheimer disease, ischemic cerebrovascular accidents, Down syndrome, cerebral bleeding due to cerebral amyloid angiopathy, progressive supranuclear palsy, subacute sclerosing panencephalitic parkinsonism, postencephalitic parkinsonism, pugilistic encephalitis, Guam parkinsonism-dementia complex, Lewy body disease, Pick's disease, corticobasal degeneration and frontotemporal dementia.

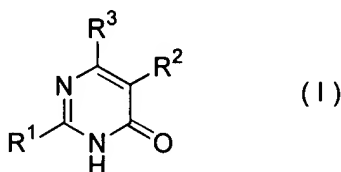
Claim 16: (New) The method according to claim 15, wherein the disease is Alzheimer disease.

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Claim 17: (New) The method according to claim 13, wherein R^2 represents a hydrogen atom and R^3 represents a 4-pyridyl group which may be substituted.

Claim 18. (New) The method according to claim 13, wherein R^2 represents an unsubstituted, linear C_1 - C_8 alkyl group.

Claim 19: (New) A method for prophylactic treatment of a disease caused by tau protein kinase 1 hyperactivity, which comprises administering to a patient a prophylactically effective amount of a substance selected from the group consisting of a pyrimidone derivative represented by formula (I) or a salt thereof, or a solvate thereof or a hydrate thereof:



wherein

R^1 represents a group represented by $-N(R^4)-W-R^5$ wherein

R^4 and R^5 independently represent a hydrogen atom, a C_1 - C_{18} alkyl group which may be substituted, a C_3 - C_{18} alkenyl group which may be substituted, a C_3 - C_{18} alkynyl group which may be substituted, a C_3 - C_8 cycloalkyl group which may be substituted, or a C_6 - C_{14} aryl group which may be substituted, and

symbol “W” represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C_1 - C_{18} alkyl group which may be substituted;

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R^2 represents a hydrogen atom, hydroxyl group, an unsubstituted C_1 - C_8 alkyl group, a C_3 - C_8 alkenyl group which may be substituted, a C_3 - C_8 cycloalkyl group which may be substituted, a C_1 - C_8 alkyloxy group which may be substituted, a C_3 - C_8 cycloalkyloxy group which may be substituted, a C_6 - C_{14} aryloxy group which may be substituted, a C_1 - C_8 alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C_1 - C_8 alkyloxycarbonyl group which may be substituted, a C_3 - C_8 cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C_1 - C_8 alkylaminocarbonyl group which may be substituted, or a C_1 - C_8 dialkylaminocarbonyl group which may be substituted; and

R^3 represents a pyridyl group which may be substituted.

Claim 20: (New) The method according to claim 19, wherein the disease is a neurodegenerative disease.

Claim 21: (New) The method according to claim 19, wherein the disease is selected from the group consisting of Alzheimer disease, ischemic cerebrovascular accidents, Down syndrome, cerebral bleeding due to cerebral amyloid angiopathy, progressive supranuclear palsy, subacute sclerosing panencephalitic parkinsonism, postencephalitic parkinsonism, pugilistic encephalitis, Guam parkinsonism-dementia complex, Lewy body disease, Pick's disease, corticobasal degeneration and frontotemporal dementia.

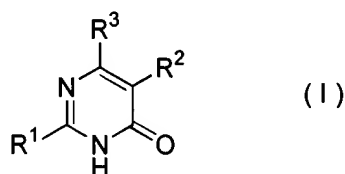
Claim 22: (New) The method according to claim 21, wherein the disease is Alzheimer disease.

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Claim 23: (New) The method according to claim 19, wherein R^2 represents a hydrogen atom and R^3 represents a 4-pyridyl group which may be substituted.

Claim 24. (New) The method according to claim 19, wherein R^2 represents an unsubstituted, linear C_1 - C_8 alkyl group.

Claim 25: (New) The method of inhibiting tau protein kinase 1 which comprises administering to a mammal a therapeutically effective amount of at least one pyrimidone derivative represented by formula (I) or a salt thereof, or a solvate thereof or a hydrate thereof



wherein

R^1 represents a group represented by $-N(R^4)-W-R^5$ wherein

R^4 and R^5 independently represent a hydrogen atom, a C_1 - C_{18} alkyl group which may be substituted, a C_3 - C_{18} alkenyl group which may be substituted, a C_3 - C_{18} alkynyl group which may be substituted, a C_3 - C_8 cycloalkyl group which may be substituted, or a C_6 - C_{14} aryl group which may be substituted, and

symbol "W" represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C_1 - C_{18} alkyl group which may be substituted;

R^2 represents a hydrogen atom, hydroxyl group, an unsubstituted C_1 - C_8 alkyl group, a C_3 - C_8 alkenyl group which may be substituted, a C_3 - C_8 cycloalkyl group which may be

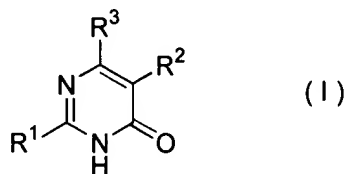
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substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R³ represents a pyridyl group which may be substituted.

A² Claim 26. (New) The method according to claim 25, wherein R² represents an unsubstituted, linear C₁-C₈ alkyl group.

Claim 27: (New) A pyrimidone derivative represented by formula (I) or a salt thereof, or a solvate thereof or a hydrate thereof:



wherein

R¹ represents a group represented by -N(R⁴)-W-R⁵ wherein

R⁴ represents a hydrogen atom;

R⁵ represents a C₁-C₁₈ alkyl group which may be substituted, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl

group which may be substituted, and

symbol "W" represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

A² R² represents a hydrogen atom, hydroxyl group, an unsubstituted, linear C₁-C₈ alkyl group, a C₃-C₈ alkenyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R³ represents a 4-pyridyl group which may be substituted.

Claim 28: (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 27 wherein R⁵ represents a C₁-C₁₈ alkyl group substituted with a C₆-C₁₀ aryl.

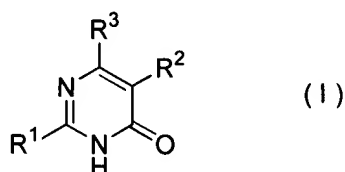
Claim 29. (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 27 wherein R² represents a hydrogen atom, an unsubstituted, linear C₁-C₈ alkyl group, or a halogen atom.

Claim 30. (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 29 wherein R^2 represents a hydrogen atom.

Claim 31. (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 27 wherein the symbol "W" represents a single bond or a carbonyl group.

Claim 32. (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 31 wherein the symbol "W" represents a single bond.

Claim 33: (New) A pyrimidone derivative represented by formula (I) or a salt thereof, or a solvate thereof or a hydrate thereof:



wherein R^1 represents a group represented by $-N(R^4)-W-R^5$ wherein

R^4 represents a hydrogen atom, a C_1 - C_{18} alkyl group which may be substituted, a C_3 - C_{18} alkenyl group which may be substituted, a C_3 - C_{18} alkynyl group which may be substituted, a C_3 - C_8 cycloalkyl group which may be substituted, or a C_6 - C_{14} aryl group which may be substituted,

R^5 represents an alkyl group which may be substituted, said alkyl group being one of ethyl group, n-propyl group, isopropyl group, n-butyl group, isobutyl group, sec-butyl group, tert-butyl group, n-pentyl group, isopentyl group,

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neopentyl group, 1,1-dimethylpropyl group, n-hexyl group, isohexyl group, a linear or branched heptyl group, octyl group, nonyl group, decyl group, undecyl group, dodecyl group, tridecyl group, tetradecyl group, pentadecyl group or octadecyl group, a C₃-C₁₈ alkenyl group which may be substituted, a C₃-C₁₈ alkynyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, or a C₆-C₁₄ aryl group which may be substituted, and

symbol "W" represents a single bond, a carbonyl group, a sulfonyl group, or a nitrogen atom which may be substituted with a C₁-C₁₈ alkyl group which may be substituted;

A² R² represents a hydrogen atom, hydroxyl group, an unsubstituted, linear C₁-C₈ alkyl group, a C₃-C₈ alkenyl group which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, a C₁-C₈ alkyloxy group which may be substituted, a C₃-C₈ cycloalkyloxy group which may be substituted, a C₆-C₁₄ aryloxy group which may be substituted, a C₁-C₈ alkylthio group which may be substituted, a halogen atom, nitro group, cyano group, an amino group which may be substituted, carboxyl group, a C₁-C₈ alkyloxycarbonyl group which may be substituted, a C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, carbamoyl group, a C₁-C₈ alkylaminocarbonyl group which may be substituted, or a C₁-C₈ dialkylaminocarbonyl group which may be substituted; and

R³ represents a 4-pyridyl group which may be substituted.

Claim 34: (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 33 wherein R² represents a hydrogen atom, an

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unsubstituted, linear C₁-C₈ alkyl group, or a halogen atom.

Claim 35: (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 34 wherein R² represents a hydrogen atom.

Claim 36: (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 33 wherein the symbol "W" represents a single bond or a carbonyl group.

Claim 37: (New) The pyrimidone derivative or the salt thereof, or the solvate thereof, or the hydrate thereof according to claim 36 wherein the symbol "W" represents a single bond.

A² Claim 38: (New) The pyrimidone derivative or a salt thereof, or a solvate thereof or a hydrate thereof according to claim 33 wherein R¹ represents N,N-diethylamino group, N,N-dipropylamino group, N-benzyl-N-methylamino group, N-isobutyl-N-methylamino group, N-benzylamino group, N-(3-hydroxypropyl)amino group, N-cyclohexylmethylamino group, N-phenylamino group, N-(4-ethylphenyl)amino group, N-(3-bromophenyl)amino group or N-(3-methoxyphenyl)amino group.

Claim 39: (New) A pyrimidone derivative which is selected from the group consisting of:

2-(N-phenylamino)-6-(4-pyridyl)pyrimidin-4-one,

2-(N,N-diethylamino)-6-(4-pyridyl)pyrimidin-4-one,

2-(N,N-dipropylamino)-6-(4-pyridyl)pyrimidin-4-one,

2-(N-benzylamino)-6-(4-pyridyl)pyrimidin-4-one,

2-(N-benzyl-N-methylamino)-6-(4-pyridyl)pyrimidin-4-one,

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2-(N-(3-bromophenyl)amino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-(4-ethylphenyl)amino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-(3-methoxyphenyl)amino)-6-(4-pyridyl)pyrimidin-4-one,
2-(N-cyclohexylmethylamino)-6-(4-pyridyl)pyrimidin-4-one, and
2-(N-isobutyl-N-methylamino)-6-(4pyridyl)pyrimidin-4-one,
or a salt thereof, or a solvate thereof or a hydrate thereof.

A2 Claim 40. A pharmaceutical composition comprising as an active ingredient a substance selected from the group consisting of the pyrimidone derivatives or a salt thereof, or a solvate thereof or a hydrate thereof according to claim 27.

Claim 41. A pharmaceutical composition comprising as an active ingredient a substance selected from the group consisting of the pyrimidone derivatives or a salt thereof, or a solvate thereof or a hydrate thereof according to claim 33.
